

Attorney Docket Number: 6847.US.O1

Filing Date: November 6, 2000

1. (Currently Amended) A method of suturing patient tissue together, the method comprising:

positioning a suture placement device adjacent patient tissue, the suture placement device having a body and a suture holder releasably attached on the body, the suture holder including a plurality of engaging elements configured to receive cuffs thereon;

actuating the suture placement device;

causing the suture placement device to pass an end portion of at least one suture element through patient tissue in response to actuating the suture placement device by engaging at least one of the engagement elements with a cuff attached to the end portion of the suture;

causing the cuff and the end portion of the at least one suture element to be held on the suture holder of the device after the end portion has been passed through the patient tissue; and

detaching the suture holder from the body of the device while the end portion and the cuff of the at least one suture element is held thereon.

2. (Original) The method of claim 1, wherein the patient tissue comprises a vessel wall having an aperture extending there through, positioning the suture placement device adjacent patient tissue comprising positioning the suture placement device to extend through the aperture.

3. (Original) The method of claim 2, wherein causing the suture placement device to pass an end portion of the at least one suture element through patient tissue comprises causing the suture placement device to pass the end portion of the at least one suture element through the vessel wall adjacent one side of the aperture.

4. (Original) The method of claim 3, which comprises causing the suture placement device to pass an end portion of another suture element through the vessel wall adjacent an opposed side of the aperture in response to actuating the suture placement device.

5. (Original) The method of claim 4, wherein the suture holder of the device has two parts, the

Attorney Docket Number: 6847.US.O1
Filing Date: November 6, 2000

method comprising causing the end portion of the one suture element to be held on the other part of the suture holder after the end portions of the suture elements have been passed through the vessel wall.

6. (Original) The method of claim 5, wherein detaching the suture holder from the body of the suture placement device comprises detaching both parts of the suture holder from the body while the end portion of the one suture element is held on the one part and the end portion of the other suture element is held on the other part.

7. (Original) The method of claim 6, which further comprises positioning another suture placement device to extend through an aperture in another vessel wall.

8. (Original) The method of claim 7, which further comprises actuating the other suture placement device to cause the other suture placement device to pass opposed ends of the suture elements through the other vessel wall, such that the opposed end portion of the one suture element extends through the other vessel wall adjacent one side of its aperture and the opposed end portion of the other suture element extends through the other vessel wall adjacent an opposed side of its aperture.

9. (Original) The method of claim 8, wherein the other suture placement device comprises a body and a suture holder releasably attached thereto, the suture holder having two parts, the method comprising causing the opposed end portion of the one suture element to be held on the one part of the suture holder and the opposed end portion of the other suture element to be held on the other part of the suture holder, after the opposed end portions have been passed through the other vessel wall.

10. (Original) The method of claim 9, which further comprises detaching the parts of the suture holder of the other suture placement device from its body while the opposed end portions of the

Attorney Docket Number: 6847.US.O1

Filing Date: November 6, 2000

suture elements are held thereon.

11. (Original) The method of claim 10, which comprises bringing together the part of the suture holder of the one suture placement device on which the end of the one suture element is held and the part of the suture holder of the other suture placement device on which the opposed end of that suture element is held, and bringing together the other part of the suture holder of the one suture placement device on which the end portion of the other suture element is held and the other part of the suture holder of the other suture placement device on which the opposed end of the other suture element is held.

12. (Original) The method of claim 11, which comprises securing the end portion of the one suture element to its opposed end portion and securing the end portion of the other suture element to its opposed end portion after the parts of the suture holders have been brought together, thereby to join the wall of the one vessel to the wall of the other vessel to form a side to side anastomosis between the vessels.

13. (Original) The method of claim 6, which further comprises positioning another suture placement device to extend through a mouth of a lumen defined by another vessel wall.

14 (Original) The method of claim 12, which further comprises actuating the other suture placement device to cause the other suture placement device to pass opposed ends of the suture elements through the other vessel wall, such that the opposed end portion of the one suture element extends through the other vessel wall adjacent one side of the mouth and the opposed end portion of the other suture element extends through the other vessel wall adjacent an opposed side of the mouth.

15. (Original) The method of claim 14, wherein the other suture placement device comprises a body and a suture holder releasably attached thereto, the suture holder having two parts, the

Attorney Docket Number: 6847.US.O1
Filing Date: November 6, 2000

method comprising causing the opposed end portion of the one suture element to be held on the one part of the suture holder and the opposed end portions of the other suture element to be held on the other part of the suture holder, after the opposed end portions have been passed through the other vessel wall.

16. (Original) The method of claim 15, which further comprises detaching the parts of the suture holder of the other suture placement device from its body while the opposed end portions of the suture elements are held thereon.

17. (Original) The method of claim 16, which comprises bringing together the part of the suture holder of the one suture placement device on which the end of the one suture element is held and the part of the suture holder of the other suture placement device on which the opposed end of that suture element is held and bringing together the other part of the suture holder of the one suture placement device on which the end portion of the other suture element is held and the other part of the suture holder of the other suture placement device on which the opposed end of the other suture element is held.

18. (Original) The method of claim 17, which comprises securing the end portion of the one suture element to its opposed end portions and securing the end portion of the other suture element to its opposed end portion after the parts of the suture holders have been brought together, thereby to join the wall of the one vessel to the wall of the other vessel to form an end to side anastomosis between the vessels.

19. (Currently Amended) A suture placement device comprising:

a body;

a support on the body, the support defining a plurality of seats, the seats being arranged to releasably receive cuffs attached to ends of suture elements [the support being arranged releasably to hold and end of at least one suture element];

Attorney Docket Number: 6847.US.O1
Filing Date: November 6, 2000

at least one [engaging element] needle displaceably mounted on the body, the [engaging element] needle being arranged to pass through patient tissue so as to engage the cuff attached to the end of the at least one suture element when held on the support and to withdraw from the tissue while the [end of the suture element] cuff is engaged therewith, thereby to pass the end of the suture element through the tissue; and

a suture holder on the body, the suture holder being arranged to hold the end of the at least one suture element after it has been passed through the tissue, the suture holder being releasably attached to the body so that the end of the at least one suture element can be removed from the body by detaching the suture holder from the body while the end of the at least one suture element is held thereon.

20. (Canceled)

21. (Presently Amended) The suture placement device of claim 20, which further comprises a plurality of needles [engaging elements] displaceably mounted on the body, each needles [engaging elements] being arranged to pass through tissue so as to engage one of the cuffs [ends of the suture elements when held on the support] and to withdraw from the tissue while the cuff and the end of the suture element is engaged therewith, thereby to pass the cuff and the end of the suture element through the tissue.

22. (Presently Amended) The suture placement device of claim 21, wherein the suture holder comprises two separate parts and wherein each part is arranged to hold an end of at least one of the cuffs and the suture elements after the cuffs and the suture elements have been passed through the tissue, so that the ends of the suture elements can be removed from the body of the device by detaching both parts of the suture holder from the body while the ends of the suture elements are held thereon.

23. (Presently Amended) The suture placement device of claim 22, wherein the needles

Attorney Docket Number: 6847.US.O1

Filing Date: November 6, 2000

[engaging elements] are connected to the suture holder parts such that the cuffs [ends of the suture elements] are removable from the body by detaching the suture holder parts from the body [while the ends of the suture elements are held on the engaging elements].

24. (Canceled)

25. (Canceled)

26. (Presently Amended) A suture placement system comprising at least two suture placement devices, each device comprising:

a body;

a support on the body, the support including a plurality of seats configured to releasably hold at least one cuff attached to an [being arranged releasably to hold and] end of at least one suture element;

at least one needle [engaging element] displaceably mounted on the body, the needle [engaging element] being arranged to pass through patient tissue so as to engage the cuff disposed on the end of the at least one suture element, wherein the cuff is releasably retained within a seat [when held] on the support and to withdraw from the tissue while the cuff and the end of the suture element is engaged therewith, thereby to pass the end of the suture element and the cuff through the tissue; and

a suture holder on the body, the suture holder being arranged to hold the cuff and the end of the at least one suture element after it has been passed through the tissue, the suture holder being releasably attached to the body so that the cuff and the end of the at least one suture element can be removed from the body by detaching the suture holder from the body while the cuff and the end of the at least one suture element is held thereon.

27. (Canceled)

Attorney Docket Number: 6847.US.O1
Filing Date: November 6, 2000

28. (Presently Amended) The suture placement device of claim 25[26], wherein the support of each device is arranged releasably to hold an end of each of a plurality of suture elements.

29. (Presently Amended) The suture placement system of claim 28, wherein each device comprises a plurality of needles [engaging elements] displaceably mounted on its body, each needles [engaging elements] being arranged to pass through tissue so as to engage one of cuffs attached the end[s] of the suture elements when held on the support and to withdraw from the tissue while the end is engaged therewith so as to pass that end of the suture element through the tissue.

30. (Presently Amended) The suture placement system of claim 29, which comprises a plurality of suture elements, one end of each suture element being attached to a cuff, wherein the cuffs are releasably held on the support of one of the devices and an opposed end of each suture element being attached to cuffs and being releasably held on the support of the other device.

31. (Presently Amended) The suture placement system of claim 30, wherein the suture holder of each device comprises two separate parts, each part being arranged to hold an end of at least one of the suture elements and cuffs after the suture elements and cuffs have been passed through the tissue, so that the ends of the suture elements and cuffs can be removed from the bodies of the devices by detaching both parts of each suture holder from the bodies of the devices while the ends of the suture elements and cuffs are held thereon.

32. (Presently Amended) The suture placement system of claim 31, wherein the needles [engaging elements] are connected to the suture holder parts such that the cuffs and the ends of the suture elements can be removed from the bodies of the devices by detaching the suture holder parts from the bodies while the cuffs and the ends of the suture elements are held on the needles [engaging elements].

Attorney Docket Number: 6847.US.O1
Filing Date: November 6, 2000

33. (Canceled)

34. (Canceled)